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Information-Seeking in Organizations and Archives

Searching for information in organizational archives is an extension of information-seeking behavior in everyday work in organizations. On a daily basis, staff members typically rely first on their own memory for needed information. Second, they rely on convenient reference tools or readily accessible records that document their knowledge and actions. Research suggests that people will use the most accessible information, regardless of whether it is the best information. One writer calls this the "Principle of Least Effort":

> ...most researchers (even "serious" scholars) will tend to choose easily available information sources, even when they are objectively of low quality, and, further, will tend to be satisfied with whatever can be found easily in preference to pursing higher quality sources whose use would require a greater expenditure of effort.[1]

This statement reflects the reality of information-seeking in most organizations, although it fails to recognize the limited resources and time pressures facing staff and administrators on a daily basis, and as we will see, it fails to recognize the structure of information flows in organizations.

Thus, when searching for information, a staff member is most likely to draw first on personal knowledge or on the records documenting his or her actions immediately at hand.[2] Records are utilitarian, created in the course of practical activities. As staff members order, direct, design, build, report, communicate, instruct, plan, evaluate, advertise, apply, announce, authorize, request, compensate, contract, or otherwise do their jobs, they create records. The title of a record often reflects the action that it creates it, such as application for leave, invitation, job order request, performance appraisal, change order, specifications, permit, and so forth. Recording technologies have proliferated, so that documents may be textual, graphic, photographic, audio, video, or electronic.

Documents are instruments for conveying information about actions in the organization and beyond from one place to another. Some documents, such as directives and instructions, flow from the top of the organization down; some, such as requests and reports, flow from the bottom up; still others, such as memoranda, flow laterally. Documents pool in filing systems in locations where the information is needed, so office files tend to have incoming documents, copies of outgoing documents, as well as notes, calendars, and other documents created and retained in the office. The filing structure is the primary mode of retrieval. Twentieth-century recording technologies, especially electrostatic copying, have increased the likelihood that copies will be found in many locations, but the aggregation of documents in any one location will be unique, reflecting the activities carried out at that location.[3]

For information beyond their own memory, files, and scope of activity, staff are likely to consult other people in the organization. One survey of university administrators found that 94% of all respondents cited other university staff members as their primary information resource.[4] Brown and Yakel found further that, "administrators rely most on human information networks resulting from years of experience and personal relationships built on trust and prior provision of reliable information."[5] It is natural that people trust information that has been selected and authenticated by a knowledgeable expert, and information that is given by the person responsible for the action. Thus, seeking information from other people in the organization is much more than simply following the principle of least effort.

Staff ask themselves, "Who would know or need to know about this problem?" To locate the right person, staff use their knowledge of organizational structure to identify the individual or office responsible for the sphere of activity, or they ask others more knowledgeable about the organization. They are likely to use the telephone in search of information. Staff directories and organization charts serve to guide people with questions to people with knowledge. Titles of both individuals and departments indicate responsibility for organizational functions.

The information seeker relies on the responsible official either to know the answer, to know their files in order to be able to find the information, or to refer the information seeker to another person, department, or organization. Staff members consult either their own memory or the memory of their actions embedded in their records, or

analyze the functions of the organization and then consult people or records resulting from that function. Often, however, this information-seeking behavior is so ingrained that staff do not think about these processes, and the search for information is so obvious that the process is transparent.

Information-seeking behavior in organizations is changing as information is increasingly recorded in electronic forms, especially in networked electronic environments. Archives at the millennium are faced with a paradigm shift comparable to the invention of the printing press 500 years ago; perhaps even comparable to the invention of writing itself five millennia ago. For the past 15 years, personal computers were primarily used to produce "fast paper," that is, people used software packages for word processing, database management, or spreadsheets to automate the production of paper documents. The flow of information continued largely through transmittal of traditional paper documents.

In the last five years, however, information is increasingly transmitted only in electronic form. Internal organizational information is distributed by electronic mail. Bulletin boards and discussion groups (list-servs) provide means to contact a wider pool of people than the telephone. Public information and reports that would have been disseminated via the printing press are now available instantly through the World Wide Web. Information once found in paper form in department files such as benefits information, customer records, library catalogs, archival finding aids, and other departmental databases are now accessible through Local Area Networks so that people can access them from their desktops, rather than calling the responsible official. Automated information services include shared cataloging through Online Public Access Catalogs, CD-ROM indexes, proprietary databases like Dialog, or full text databases like Lexis or Nexis.

In the last few years as computers have been linked in networks, either Local Area Networks within organizations or through the Internet to other organizations, users have come to rely upon powerful and convenient online tools and information resources. At the same time, however, many records are no longer captured in a tangible form. Records are created, communicated, filed, retrieved, or lost only in electronic form. **There is the tendency to think that if information is not in electronic form, it does not exist.** In some cases, the information resources on the Internet are so chaotic, information is as good as lost.

Information Seeking in Archives

With the passage of time, people move on, but the organization continues. With good records management, records documenting significant actions with continuing consequences are transferred to organizational archives so that later information seekers, whether later incumbents or others seeking evidence of past actions, can find them. **The mission of the archival profession is to identify records that have continuing usefulness, preserve them, and make the information in them accessible through time.** Records management for electronic records is still in its infancy, but for federal agencies the decision of District Court Judge Paul L. Freidman in *Public Citizen v. John Carlin*, October 1997, has given it greater urgency by making it mandatory. Although the National Archives and most state archives have begun programs to manage electronic records, most archival holdings consist of documents on paper.

The search for information in archives about past actions is similar to searching for current information in organizations but is more complex. Locating information about past actions depends on interaction among three archival functions: arrangement, description, and reference services.

Arrangement: Archivists use provenance and original order to capture the contextual information that made the records usable as they were created. Records are kept together as a group linked to the person, office, or organization that created them. Provenance links records to the functions that created them, reflects organizational functions, and preserves the lines of communication graphically outlined in the organizational chart. If the records are kept in the same order as they were filed, the location of each item in the filing structure can be predicted. Retaining provenance ensures that the evidence in the records is authentic. No later hand has added, subtracted, or moved the evidence from the actions that created them. In archives, unlike libraries, individual documents are not re-filed according to a predetermined subject scheme. If a later person, following a library model of information retrieval, rearranges documents or mixes them with documents from another organization, then the evidence cannot be trusted, nor can the content be predicted. **A chain of continuous custody from the creator to the user ensures the authenticity of evidence.**

Provenance is a powerful predictor of content and locator of evidence. Provenance and original order serve to retain the physical organization of records as found in offices when they are transferred to shelves in archives.

Description. As time passes, knowledge of functions and forms of records fades from personal memory. Or, records are transferred to outside repositories. Information seekers, whether archivists or researchers, need information about functions, forms, and content of records. Archival description focuses on groups of records and their

Finding aids describe and index historic documents to make the information in them accessible for use. The information in these paper finding aids will be migrated to the archives module of the NPS Museum Management Program's Automated National Catalog System (ANCS+) to provide interactive online access. Photo by Campbell/Danford, courtesy San Francisco Maritime National Historical Park.

relationships. Descriptive control over a collection is progressively refined from the top down, working from the broadest group to the appropriate level of description, whether series, file, or item.

Archival description is meta-data; that is, it is information about information, that leads a user to information and helps a user to understand it. It is also management information that allows archivists to acquire and preserve the holdings. A useful definition is:

> Archival description is the process of capturing, collating, analyzing, and organizing any information that serves to identify, manage, locate, and interpret the holdings of archival institutions and explain the contexts and records systems from which those holding were selected.[6]

Elements of information about records may be captured as they are created, acquired, arranged, and used. These data elements may be embodied in a number of products, such as donor records, accession lists, inventories, finding aids, catalogs, indexes, registers, card catalogs, indexes, databases, or guides, and displayed on paper or online. **An ideal descriptive system allows archivists to collect all data elements about a collection in one system and produce any number of products.** If such a system is based on national standards, information about collections can be shared with other repositories.

Over time, repositories have used many types of finding aids, but in recent years information about each record group has been standardized into finding aids that include an administrative history outlining organizational functions and series descriptions describing the forms and filing structures of the records. Most also include lists of the contents, for example, file titles for textual records, titles of videotapes, titles of oral history interviews, and identifications of photographs. The archivist also provides index terms for the record group. The index terms for all record groups are accumulated in a master index so that users who do not know the functions or forms of records can be pointed to the records likely to be of interest to them. Index terms can include subjects, personal names, corporate names, place names, as well as terms for functions, and terms for the forms of records, such as minutes, logbooks, architectural drawings, photographs, and videotapes.

Reference Services. Archives staff play a critical role in linking researchers, finding aids, and records. Reference assistance is often vital to the success of users in archives. School children are taught to use libraries, but most users are not familiar with archives, nor do they extend their insights from searching for information in their daily work to searching for information in archives. The reference process in archives has intellectual elements, administrative elements, and is complicated by the interpersonal dynamics of reference interaction.[7]

Intellectual elements. The most important function of reference services in archives is providing intellectual access. Providing intellectual access includes providing information about the repository; information about its holdings; information from its holdings; information about records creators, and referrals to other sources. To use records, users must know that they exist and how to find them. If users know the scope of the collection of a repository they can often predict whether the collections will have information or evidence for them. Researchers also need practical information about location, telephone numbers, public hours, services, and access policies. **Researchers find such information through national, regional, or thematic directories; publications such as brochures, signs, and guides; public programs such as lectures or workshops, and increasingly through the Internet**. A useful directory of archival Web sites, "Repositories of Primary Sources," is maintained by Terry Abraham at the University of Idaho.[8] Leon Miller at Tulane University maintains a site, "Ready,'Net,Go! Archival Internet Resources." This site includes lists of archival Web sites and well as links to tools for archivists, archival search engines, and professional sources.[9]

A number of sources locate information about holdings. Some repositories publish guides that summarize information about groups of records. Of most use to federal agencies is the *Guide to Federal Records in the National Archives of the United States* (1995). It includes extremely useful agency histories that identify the functions of government from its founding and their reporting relationships, as well as descriptions of the forms

and contents of records. It is extensively indexed. The National Archives maintains a very useful Web site. It includes the *NARA Archival Information Locator (NAIL)* a prototype searchable database of information about selected records and digital copies of some documents. Also maintained is the "Reference at Your Desk," by the National Archives Library and Information Center (ALIC), which includes links to laws, copyright regulations, legal resources, biographical, and geographical resources.

The first reference tool to describe and index manuscript collections from repositories throughout the United States was the *National Union Catalog of Manuscript Collections*, NUCMC, affectionately known as "nuck muck." From 1959 to 1993, the Library of Congress published descriptions of approximately 72,300 collections located in 1,406 different repositories in 29 annual printed volumes, which included approximately 1,085,000 index terms. The final printed volume was published in 1994. Cataloging for the volumes from 1986 to 1993 and all ongoing cataloging is available only online. To provide access to its online cataloging NUCMC provides free access through a Z39.50 Gateway to the Research Libraries Information Network-Archives Manuscripts Collections database (RLIN AMC). The NUCMC site also provides links to other Library of Congress resources, archival societies, archival education, electronic discussion groups and periodicals, bibliographical utilities, preservation, and the Encoded Archival Description (EAD) standard and its use by the archival profession.[10]

National bibliographical utilities, most notably the Online Computer Library Center (OCLC) and the Research Libraries Information Network (RLIN) also provide collection-level descriptions of archival holdings, structured according to the national standard for sharing information about holdings, in Library of Congress machine-readable cataloging format (MARC). Both began as utilities to provide the benefits of shared cataloging for published materials, OCLC to serve smaller college and public libraries, RLIN to serve large university research libraries. Both have now found that the databases are as useful for reference staff and patrons searching for information as for providing cataloging. RLIN in particular has developed as a cultural resources databases. Both charge for searches. Many library online public access catalogs (OPAC) include descriptions of archival holdings, and some are available though the Internet.

An increasing number of archival finding aids are now available online and archivists are creating a standard for storing this information so that it can be shared and migrated for preservation, the Encoded Archival Description (EAD) in Standard Generalized Markup Language (SGML). Collections of digitized documents, especially photographic images, are also available on the Web. A useful place to start is the Berkeley Digital Library SunSite, maintained by the University of California at Berkeley and Sun Microsystems.[11] It provides links to catalogs and indexes, including finding aids, as well as links to text and image collections both at Berkeley and elsewhere. It provides links to other services such as information for digital library developers, reports on research and development, software tools, and learning tools.

Chadwyck-Healey offers a subscription to *Archives USA* which includes the *Directory of Archives and Manuscript Repositories in the United States*, collection records from NUCMC, and indexing for its microfiche publication of finding aids, the *National Inventory of Documentary Sources*. It is available on CD-ROM or on the Web for subscribers.[12]

Interpersonal Dynamics of Reference Services

Providing intellectual access in the repository and in providing information from holdings has traditionally been predicated on personal interaction between archivist and information seeker. Archives are mysteries to most users, and reference services are often educational services in expanding the mental models of users to encompass the range of archival records, the variety of finding aids available, and the development of a search strategy for exploiting them. Information searches in archives are typically mediated through the archivist. In institutional archives, we have seen that administrators tend to use personal contacts for information, and Yakel and Bost confirm my experience that most do not use finding aids or records. They expect information to be extracted and packaged for them.[13]

Interpersonal dynamics are vital in the reference process. Although a library user may find information without ever interacting with a librarian, this is rarely true in archives. In most cases, an information seeker contacts a repository either in person or by phone, mail, fax, or email. Typically, a user begins with an initial interview with the archivist, whether in person or over the telephone, or through correspondence or email. **The initial interview begins with question abstraction, in which the seeker and the archivist identify the topic, delimited by time, place, and the seeker's intended use. Next, in question resolution, archivist and user analyze the topic and the intended use in terms of the archival resources available and form a search strategy, a plan for identifying the sources of information likely to answer the question.** This is an inferential process based on what is known

about the records and the functions that created them, an extension of information seeking in the creating organization. Archivists play a vital role in this process because of their understanding of the universe of documentation and how a user's questions fit that universe.

Question refinement is the third stage of reference interaction and is a continuing process as questions and topics are refined in light of information discovered during research. Ideally the reference interaction is closed with an exit interview in which the archivist has the opportunity to determine the success of the seeker and the patron can evaluate archival information and archival services.

Nonverbal communication both clarifies and complicates interpersonal communications. Information seekers often find it difficult to expose ignorance to a stranger when the response is unknown. This fact underscores the importance of building interpersonal relationships in institutional archives, so that administrators and staff will feel comfortable and confident in asking questions. Active listening is probably more important than talking. Taking time to draw out the full question and determining the level to which it needs to be answered is important for both seeker and archivist. The necessary administrative elements of providing physical access to archives, such as registration, procedures to ensure integrity and preservation of archival evidence, photocopying, and the like must be handled so that they do not hinder the building of trust and confidence necessary to intellectual access.[14]

Information seeking in organizations occurs in a complex environment of interpersonal networks, electronic networks, and record-keeping networks. If archivists understand the full range of information resources in organizations, regardless of their forms, implement a sound records management program for both tangible and electronic records, and respond to the complexity of information-seeking behaviors of administrators, staff, and the public, they can provide a vital service to their organization.

Notes

1 Thomas Mann, *Library Research Models* (New York, Oxford University Press, 1993), 91.

2 This fact explains why staff are often reluctant to send their records to the archives.

3 The role of documents in modern organization is discussed in JoAnne Yates, *Control through Communication: The Rise of System in American Management* (Baltimore: Johns Hopkins University Press, 1989).

4 Mary W. Sprague, "Information-Seeking Patterns of University Administrators and Nonfaculty Professional Staff Members," *Journal of Academic Librarianship* 19 (1994): 378. Cited in William Brown and Elizabeth Yakel, "Redefining the Role of College and University Archives, " *American Archivist*, (Summer 1996): 282.

5 Brown and Yakel, 283.

6 Victoria Irons Walch, *Standards for Archival Description: A Handbook* (Chicago: Society of American Archivists, 1994) 2.

7 Mary Jo Pugh, *Providing Reference Services for Archives and Manuscripts* (Chicago: Society of American Archivists, 1992, and "Illusion of Omniscience: Subject Access and the Reference Archivist," *American Archivist* 45 (Winter 1982):33-44, reprinted in *Modern Archives Reader* (Washington, D.C.: National Archives, 1984). See also Laura B. Cohen, ed., *Reference Services for Archives and Manuscripts* (New York: Haworth Press, 1997).

8 Repositories of Primary Sources <http://www.lib.uidaho.edu/special-collections/Other.Repositories.html>.

9 <http://www.tulane.edu/~lmiller/ArchivesResources.html>.

10 NUCMC <http://lcweb.loc.gov/coll/nucmc/nucmc.html>.

11 Berkeley Digital Library SunSite <http://sunsite.berkeley.edu>.

12 <http://archives.chadwyck.com>.

13 Elizabeth Yakel and Laura Bost, "Understanding Administrative Use and Users in College and University Archives," *American Archivist* 157 (Fall 1994) 596-615.

14 Linda J. Long, "Question Negotiation in the Archives Setting: The Use of Interpersonal Communications Techniques in the Reference Interview," *American Archivist* 52 (Winter 1989): 40-51, and Helen Tibbo, "Interviewing Techniques for Remote Reference: Electronic Versus Traditional Environments," *American Archivist* 58 (Summer 1995): 294-311.

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